Saxicoris, a new genus of Psamminae from South Africa (Hemiptera: Lygaeidae)*

by

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Slater & Sweet (1965) raised the tribe Psammini Bergroth to subfamily status and discussed the relationships to other lygaeoid groups. The subfamily has until now been represented by two genera, *Psammium* Breddin from South Africa and *Sympeplus* Bergroth from India.

Through the kindness of Dr A. J. Hesse of the South African Museum, Cape Town, we have been able to examine a very distinctive new genus from South Africa.

As discussed by Slater & Sweet (1965), the psammines are very unusual lygaeids which have the front wings fused into a pair of strongly convex, completely coriaceous coleopteroid elytra that completely cover the abdomen and give the insect the appearance of a small beetle. The hind wings and ocelli are lacking. The abdominal tergum is completely membranous except for narrow sclerites marking the area of the nymphal scent-gland openings between terga four-five and five-six. The tarsi are two-segmented. The bucculae extend forward as bulbous protrusions that meet anteriorly. The abdominal spiracles are placed dorsally on segments two to seven. The trichobothria are reduced to a single one located midway between the anterior and posterior margins of sternum five, and a pair on sternum six. Scale-like waxy hairs are present on the body surface. The seventh sternum of the female is completely cleft.

Saxicoris gen. nov. agrees with the previously described species in all of the above characters as well as in the conformation of the spermatheca and of the female genital segments.

At the time of our 1965 paper nothing was known of the biology of any members of the subfamily although we speculated that they were adapted for some type of cryptic habitat. During 1967–1968 both of us had opportunity to do extensive field collecting in South Africa. On several occasions we collected series of *Psammium mica* Bergroth among small stones and pebbles on the ground near the bases of plants. The insects were extremely slow-moving and so cryptically shaped and coloured as to be almost indistinguishable among the pebbles until slight movements revealed their presence. Although nothing is known of the biology of *Saxicoris verrucosus* spec. nov., the appearance of the insect leaves little doubt that it lives in a similar habitat, and from the type locality it is likely that it occurs on sand. Indeed the dorsal surface of the holotype is covered with tiny stones and pebbles or sand grains that are difficult to distinguish from the simi arly coloured and shaped "warty" protuberances of the actual body surface. The small

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stones or sand grains adhere to the body surface which is coated with a waxy covering so that the insect certainly would have every appearance in the field of an irregular group of tiny sand grains or stones.

SAXICORIS gen. nov.

Type-species: *Saxicoris verrucosus* spec. nov. Monobasic.

Body elliptical, strongly convex across hemelytra; dorsal surface of head, pronotum and elytra bearing numerous irregular "warty" protuberances, giving insect an irregular pebbly appearance; antennal segment 3 longer than segment 2, a large blunt projection present above and slightly lateral to antenniferous tubercles; eyes large, protrudent, extending beyond but not over antero-lateral pronotal angles on broad projecting stalk-like head projections; bucculae high, expanded anteriorly to converge and come in contact anteriorly to form a somewhat bulbous structure, posteriorly reaching base of head, bluntly pointed and free posteriorly; ocelli absent; pronotum strongly transversely subquadrate, much broader than long, lateral margins coarsely crenulate and narrowly explanate, posterior margin shallowly concave; scutellum with very prominent median elevation strongly down-curved posteriorly; hemelytra with corium and clavus indistinguishably fused, each hemelytron forming a strongly convex coleopteroid cover, entirely covering abdomen, four series of warty protuberances running antero-laterad from meson; prosternum and mesosternum with a broad deep median trough or furrow for reception of labium, mesosternal furrow extending posteriorly between metacoxae and bluntly rounded at posterior end, meso- and metacoxae widely separated; femora mutic, little incrassate, tarsi 2-segmented; ♀ abdomen with 7th sternum completely cleft; trichobothria present only on 5th and 6th sterna, a single trichobothria located midway between anterior and posterior margin on sternum 5, 2 trichobothria on sternum 6; abdominal tergum completely membranous with narrow sclerotization present in area of nymphal dorsal scent gland orifices between terga 4–5 and 5–6, inner laterotergites absent, a faint vestige present on tergum 4; spermatheca short, stout, with a terminal bulb with proximal flange present on bulb.

Saxicoris verrucosus spec. nov., fig. 1

FEMALE. General coloration cinereous to testaceous, becoming dark red-brown dorsally on head, mesal area of pronotum, base and lateral regions of scutellum and irregularly on ridges between warty protuberances on elytra, ventral surface with exception of acetabula, and caudo-lateral angles of prothorax; coxae, trochanters and femora chiefly dark red-brown, tibiae with a basal and broad subapical red-brown band, tarsi extremely dark brown to nearly black at distal end, distal $\frac{1}{4}$ of femora and areas between tibial annulations testaceous; antennae with segments 1 and 2 pale testaceous, segments 3 and 4 strongly contrasting dark chocolate brown; clothed above and below with broad, flat, waxy, scale-like hairs, these obscured dorsally by a waxy coating except at base of scutellum and head; entire body surface above and below closely coarsely punctate (obscured dorsally by coating of wax).

Head with tylus somewhat compressed, extending far forward of apices of juga, attaining or slightly surpassing distal end of 1st antennal segment, subequal anteriorly to bucculae, the latter prominent laterad of tylus, vertex of head nearly flat with mesal area strongly protrudent into a pair of divergent rounded lobes well separated

from one another at midline lying at base of tylus, and a third longitudinally ovoid protuberance on meson between eyes; head length 0·70, width 1·06, interocular space 0·58. Pronotum laterally with a pair of laterally directed shelf-like rounded expansions above lateral margins, broadest in humeral area, and a second crenulate flange on

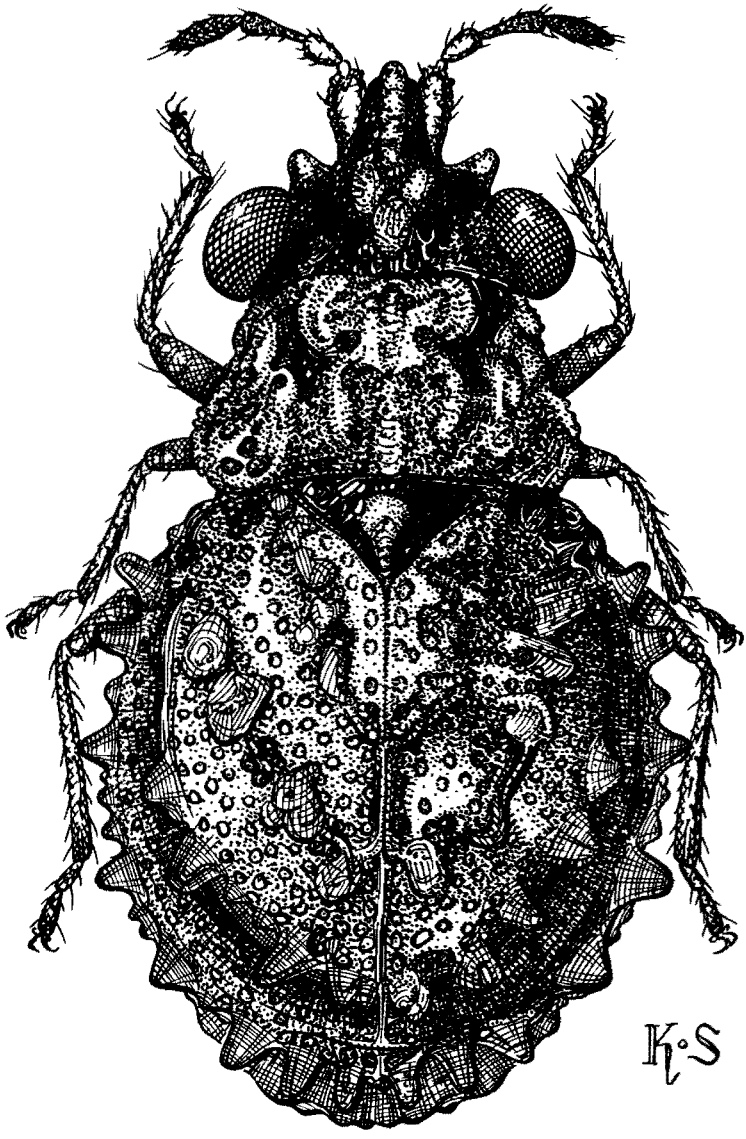

Fig. 1. *Saxicoris verrucosus* spec. nov. Dorsal view.

anterior half, dorsal surface of pronotum with a series of compressed warty elevations as follows: on anterior half 1 on midline and 1 on anterior margin extending 1/3 way to posterior margin located midway between meson and lateral margin, on posterior half a slender elevation along meson at posterior margin, and a pair of strongly compressed ridges on either side of meson, the inner one 1/3 and the outer one 2/3 distance from meson; pronotum length 0·50, width 1·12. Scutellum with basal half slightly convex, distal half mesally very strongly and sharply elevated, with the extreme apex down-curved; scutellum length 0·36, width 0·56. Elytra complexly ridged and protrudent, the elevations forming four curving ridges, each ridge running somewhat concavely from meson antero-laterad, ridges interrupted by a series of T-shaped, Y-shaped or subconical elevations, anterior ridge with 4 to 5 of these irregular elevations, second ridge with 5, third ridge with 4, fourth ridge which runs as a submarginal elevation just within lateral margins of elytra bearing 7 or 8 prominent outwardly directed, bluntly subconical protuberances, lateral margins of elytra coarsely crenulate, crenulations tending to form blunt bifid protuberant areas, maximum length hemelytra 1·66, maximum width across hemelytra 1·52, median length 1·44. Metathoracic scent gland auricle elongate, slender, slightly broadening distad, rounded at apex, extending to anterior 1/3 of metapleuron, the latter strongly angulate near caudo-lateral margin. Femora without prominent spines but finely and thickly crenulate over entire surface; tibiae bearing a series of tiny spines on both inner and outer surface of distal half, basal half with a row of fine crenulations along outer margin. Labium extending between but not beyond mesocoxae, segments 1 and 2 lying within bucculae, length of labial segments 1–0·26, 2–0·24, 3–0·22, 4–0·28. Antennae with segment 1 much broader and thicker than succeeding segments, somewhat swollen on distal 2/3, 2nd segment short, subglobose, 3rd segment narrowly clavate, 4th segment strongly fusiform; length of antennal segments 1–0·24, 2–0·10, 3–0·14, 4–0·20; total length 2·92. Spermatheca with a prominent bulb bearing a proximal flange, pump broad and nearly as long as duct, the latter slightly twisted; 8th valvifers broad and subtruncate, forming a sharp angle at caudo-lateral margin rather than being evenly curved as in *Psammium*, 9th valvifers broadened and sharply angled rather than evenly strap-like; 9th paratergite very broadly rounded.

HOLOTYPE. ♀. SOUTH AFRICA; Cape Province; Doringbaai, November 1956 (S.A. Mus. Exp.). In South African Museum, Cape Town.

PARATYPE. ♀, same data as holotype. In J. A. Slater collection.

Doringbaai is located on the Atlantic Ocean at 31° 49′S, 18° 14′E and is approximately 47 miles northwest of Clanwilliam.

This new species is very readily separated from the other known psammines by the warty protrusions present on the dorsal surface. It also may be separated from the other South African genus *Psammium* by having the third antennal segment longer than the second, and lacking abdominal inner laterotergites on segments three, five and six.

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REFERENCE

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